

REMARKS

The examiner argues that claims 26 and 27 are indefinite under 35 U.S.C § 112, second paragraph, as being indefinite by virtue of including the terms “approximately thirty seconds” and “approximately sixty-four kilobytes,” respectively. Applicant amends those claims herein to read “at or about thirty seconds” and “at or about sixty-four kilobytes,” and believes that such changes fully address the examiner’s noted concerns.

The Rejection of Claims 1-12, 14-24, 28-36, and 38-45

More substantively, the examiner argues that claims 1-12, 14-24, 28-36, and 38-45 are anticipated under 35 U.S.C. § 102(e) by Falco (U.S. Pat. No. 6,501,733). This anticipation rejection applies to all independent claims in the instant application—claims 1, 9, 19, 29, and 39. An anticipation rejection is supported only if the allegedly anticipating reference teaches or suggests each and every limitation of the rejected claim(s), and in the identical arrangement of the rejected claim(s). Falco fails as a matter of law because it does not teach or suggest each and every limitation of the rejected claims—indeed, Falco is quite different than the claimed invention.

For example, Falco teaches a store-and-forward communication node that determines whether to buffer an incoming “receive data message” based on predicting a transmission-departure time for the message. Falco’s node temporarily stores the message if the transmission-departure time prediction indicates that a waiting time limit will not be violated, but discards—i.e., does not store—the message if the prediction indicates that the waiting time limit will be exceeded. See, Falco’s Abstract, claims, Figs. 2A and 2B, and the corresponding discussion, wherein Steps S16/S20 in Fig. 2A and Steps S16/S26/S30 plainly illustrate that Falco teaches a node that buffers or discards incoming data based on predicting transmission-departure times.

All independent claims in the instant application include limitations directed to managing data for a dormant mobile station at a Packet Control Function (PCF). Falco does not disclose a PCF, nor does it discuss or relate to dormant mobile terminals.

While the examiner seems to equate Falco's store-and-forward communications node with Applicant's claimed PCF method and apparatus, drawing that equivalence is an error made plain by Falco's disclosure. Specifically, at col. 2, lines 26-46, Falco plainly identifies its store-and-forward communications node as being positioned between a Mobile Switching Center (MSC) 10 and a base station 18, or, alternatively, being integrated with the MSC 10. While this may not seem significant to the examiner, those skilled in the wireless communication arts will appreciate that the MSC 10 couples the base station 18 to the Public Switched Telephone Network (PSTN) for circuit-switched services, and does not relate to the type of packet core network connections provided by PCFs.

Indeed, the instant application explains, that a PCF establishes, maintains, and terminates a data link protocol to Packet Data Serving Nodes (PDSNs) in a wireless communication network, and further requests radio resources from the network to support the exchange of packets between the PDSNs and mobile terminals. A PCF also maintains knowledge of radio resources (e.g., active, dormant) for the packet data sessions it is supporting. See, e.g., the instant application at p. 6, line 25 - p. 7, line 4. (Note that a "dormant" mobile terminal retains its logical connection to the network, i.e., its PPP session, but does not have active radio links to the network.)

With the above context in mind, according to all independent claims herein, when data arrives at a PCF for delivery to a dormant mobile station, the PCF buffers the data and starts a timer in association with initiating connection reestablishment for the dormant mobile terminal. If the PCF does not receive indication of successful reactivation before expiration of the timer, it discards the buffered data. Conversely, if the mobile terminal is reactivated—i.e., its connection is reestablished—before expiration of the timer, the PCF delivers the buffered data.

For example, claim 1 includes the following text:

A method of managing incoming data for a dormant mobile terminal at a packet control function (PCF) in a wireless communication network, the method comprising:

- receiving incoming data from a public data network (PDN) for the dormant mobile terminal at the PCF;
- starting a timer responsive to receiving the incoming data;
- initiating connection establishment between the dormant mobile terminal and the PCF responsive to the incoming data;
- buffering the received incoming data;
- transferring the buffered incoming data from the PCF to the previously dormant mobile terminal if the connection is established before expiration of the timer; and
- discarding the buffered incoming data if the connection between the dormant mobile terminal and the PCF is not established before expiration of the timer.

(Emphasis added.)

In looking at the above claim, Falco does not teach receiving and buffering data as claimed. Rather, Falco teaches receiving a message and then temporarily storing it only after predicting a transmission-departure time for the message to determine whether a waiting time will be violated. If the waiting time will be violated, Falco discards and does not temporarily store the message. Also, as previously noted, Falco does not relate to PCFs and dormant mobile terminals.

Further, Falco does not teach, or even hint at, starting a timer responsive to receiving the incoming data. (Note that the word “timer” does not appear even once in Falco.) Necessarily, then, Falco does not teach transferring the buffered data from a PCF to a previously dormant mobile terminal if the (mobile terminal’s) connection is reestablished before expiration of the timer. Likewise, Falco does not teach discarding the buffered data if the timer expires before the dormant mobile terminal is reconnected.

As a matter of law, then, Falco cannot stand as an anticipating reference for claim 1 and its dependents, because it simply does not teach or suggest all (or any) of the limitations of claim. Likewise, the remaining independent claims, 9, 19, 29, and 39, all include similar limitations, and Falco cannot anticipate those independent claims and their dependents. As

such, Applicant respectfully requests that the examiner withdraw all anticipation rejections based on Falco.

The Rejection of Claims 13 and 37

Turning from the anticipation rejections to the obviousness rejections made by the examiner against claims 13 and 37, the examiner argues that the combination of Falco with Griffith (US 2002/0080774) renders claims 13 and 37 obvious under 37 C.F.R. § 103(a). Applicant notes that the rejection of these dependent claims is based on Falco, and is therefore moot in light of the patentability of the corresponding independent claims over Falco.

Additionally, Applicant takes direct issue with the examiner's characterization of Falco in making out the rejection of claims 13 and 37. For example, the Office Action at p. 19 states that:

Falco further discloses that if a TCP segments [sic] takes too long to reach its intended destination, a TCP 'time-out' condition can occur, resulting in a TCP window-size reduction, which can slow overall data throughput. Falco still further discloses that by buffering a TCP segment received and determining the optimum segment size for data traversing a particular wireless link, the received TCP segment can be reformatted into a number of smaller or otherwise more appropriate sized [sic] segments.

For support of the above assertion regarding Falco's teachings, the examiner references Falco at p. 1, paragraph 19, lines 3-6; p. 2, paragraph 21, lines 1-7; paragraph 22, lines 1-8; and claim 13. Applicant notes that these reference identifiers do not make sense in the context of Falco, which is arranged in column number / line number format, and not in paragraph number / page number format.

Regardless, Applicant has searched Falco word-for-word and cannot find any reference to Transmit Control Protocol (TCP) segments, TCP time-outs, TCP window sizes, or anything to do with TCP-based data transmissions. Indeed, using electronic word search facilities in concert with the Patent Office's text version of the Falco patent, Applicant cannot find the words "TCP," "segment," "window," "time-out," "window size," or any equivalents of them, anywhere within Falco. As such, unless the examiner withdraws all rejections based on these asserted

teachings in Falco, Applicant respectfully asks for the examiner's assistance in particularly identifying the relevant sections in Falco.

Finally, Applicant notes the legal insufficiency of the examiner's proffered motivation to combine Griffith with Falco. The examiner states that one skilled in the art would have been motivated to combine Griffith with Falco "to generate the claimed invention with a reasonable expectation of success." Respectfully, that statement is conclusory and unsupported by the record evidence, and is not what is intended when Section 2142 of the MPEP explains that the examiner bears the initial burden of making out a prima facie case of obviousness under 35 U.S.C. § 103.

Establishing the prima facie case depends on meeting three basic criteria: (1) there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings; (2) there must be a reasonable expectation of success; and (3) the prior art reference (or references when combined) must teach or suggest all the claim limitations.

MPEP, § 2142. Note that Item (1) states that the motivation to combine must be found in the references themselves, or in the knowledge generally available in the art.

Thus, the prior art relied upon by the examiner in advancing an obviousness rejection must teach or suggest the claimed combination and a reasonable expectation of success with regard to making the claimed combination, and it is legally impermissible for the examiner to rely on the applicant's disclosure for such teachings. In re Vaeck, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991). More specifically, the examiner bears the burden of presenting a convincing line of reasoning as to why the skilled artisan would have found the claimed invention obvious in light of the teachings of the references. Ex parte Clapp, 227 USPQ 972 (Bd. Pat. App. & Inter. 1985).

Ultimately, whether an invention is obvious over the prior art is a question of law, supported by an underlying factual analysis. In re Berg, 320 F.3d 1310, 65 USPQ2d 2003 (Fed.

Cir. 2003). More significantly, with respect to the examiner's obviousness rejection, the determination of whether there is a motivation or suggestion to combine references is a factual question based on specific findings. Gartside, 203 F.3d 1305. On that point, the substantive question is whether one of ordinary skill in the art would have been motivated to combine the references in question. Winner International Royalty Corp. v. Wang, 202 F.3d 1340, 53 USPQ2d 1580 (Fed. Cir. 2000).

The examiner has made no specific findings regarding teachings in Falco and Griffith that would support a motivation-to-combine argument. Indeed, the examiner has made no argument at all, beyond simply stating that one skilled in the art would be motivated to generate the claimed invention. That argument falls far short of carrying the examiner's legal burden.

The Rejection of Claim 25

The examiner rejects claim 25 based on the combination of Falco, Rosen (U.S. Pat. No. 6,904,288, and Semper (U.S. Pat. No. 6,904,028). Applicant notes that the rejection of dependent claim 25 is based on Falco, and is therefore moot in light of the patentability of the corresponding independent claim over Falco.

Setting aside the fact that Falco does not teach the claimed PCF buffering of dormant mobile terminal data, the examiner argues that Falco teaches all aspects of claim 25, except for the explicit limitations directed to the TIA/EIA/IS-2000 standards for the claimed communication network, and the further limitation of signaling based on the IOS v4.0 signaling standards. The examiner goes on to state that Rosen teaches an invention wherein Short Data Burst (SDB) messages are used in the context of an TIA/EAI/IS-2000 based network, to shorten reactivation times for dormant mobile stations, and that Semper teaches the use of 5 ms messages based on the IOS v.4.0 standard to carry essential signaling between mobiles and base stations in a CDMA2000 network. The examiner then goes on to state that

It would have been prima facie obvious to one of ordinary skill in the art at the time of the invention was made [sic] to modify the wireless communication network of Falco to be based on the TIA/EIA/IS-2000 standard as taught by

Rosen and the IOS v.4.0 standard as taught by Semper so that communications node 14 [sic] of Falco can communicate to a downstream code-division, multiple-access systems [sic] (CDMA). One would have been motivated to combine Falco with Rosen and Semper (collectively Falco-Rosen-Semper) to generate the claimed invention with a reasonable expectation of success.

The above rejection argument is, with all due respect, nonsensical. Falco does not teach the claimed PCF buffering, irrespective of whether Falco, Rosen, and/or Semper, mention IS-2000 network standards and/or IOS v.4.0 standards. Whatever type of network Falco is applied to, Applicant's claimed invention is patentably distinct from Falco.

Thus, if the examiner uses Rosen because it mentions IS-2000 networks, then why not use any document that mentions the IS-2000 standards? No such reference is relevant to the fact that Falco does not teach the claimed PCF buffering. If the examiner uses Rosen because it relates to SDB messaging, then one has to wonder what those teachings have to do with Falco, or with Applicant's claimed invention. Rosen adds nothing to Falco that is relevant to Applicant's claimed invention.

Likewise, if the examiner uses Semper because it mentions IOS v.4.0, then why not use any document that mentions the IOS v.4.0 standards? If the examiner uses Semper because it teaches fast 5 ms signaling, then one has to wonder what those teachings have to do with Falco, or with Applicant's claimed invention. Semper adds nothing to Falco, Rosen, or Falco-Rosen that is relevant to Applicant's claimed invention.

Moreover, whether Falco, Rosen, and Semper are even combinable is the subject of reasonable debate, and what one would get by combining them is pure speculation. The examiner makes no attempt to address any of these legitimate questions, and simply states that the reason one would take such a collection of disparate and unrelated references is to "generate the claimed invention." That statement is legally insufficient, and for that reason, and for the other reasons discussed above, the obviousness rejections based on Falco, taken alone, or in any combination with Rosen and/or Semper, must be withdrawn.

The Rejection of Claims 26 and 27

The examiner rejects claims 26 and 27 as obvious over Falco standing alone. Applicant notes that the rejection of these dependent claims is therefore moot in light of the patentability of the corresponding independent claim over Falco.

The Rejection of Claims 46, 47, and 49

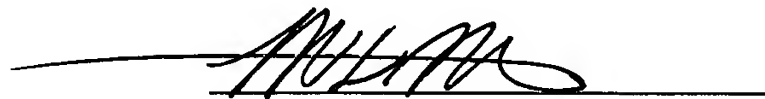
The examiner rejects claims 46, 47, and 49 based on the combination of Falco, Rosen, and Madour (U.S. 2002/0176382). Applicant notes that the rejection of these dependent claims is based on Falco, and is therefore moot in light of the patentability of the corresponding independent claim over Falco.

Conclusion

In the above amendments, Applicant addresses the examiner's indefiniteness concerns. With those concerns addressed, Applicant believes that the instant application stands in condition for allowance, and respectfully requests reconsideration by the examiner as such. Should the examiner have any questions regarding this response, or feel that prosecution of the instant application will be advanced through discussion, the undersigned attorney would welcome a telephone call.

Respectfully submitted,

COATS & BENNETT, P.L.L.C.



Dated: January 5, 2006

Michael D. Murphy
Registration No.: 44,958
P.O. Box 5
Raleigh, NC 27602
Telephone: (919) 854-1844
Facsimile: (919) 854-2084